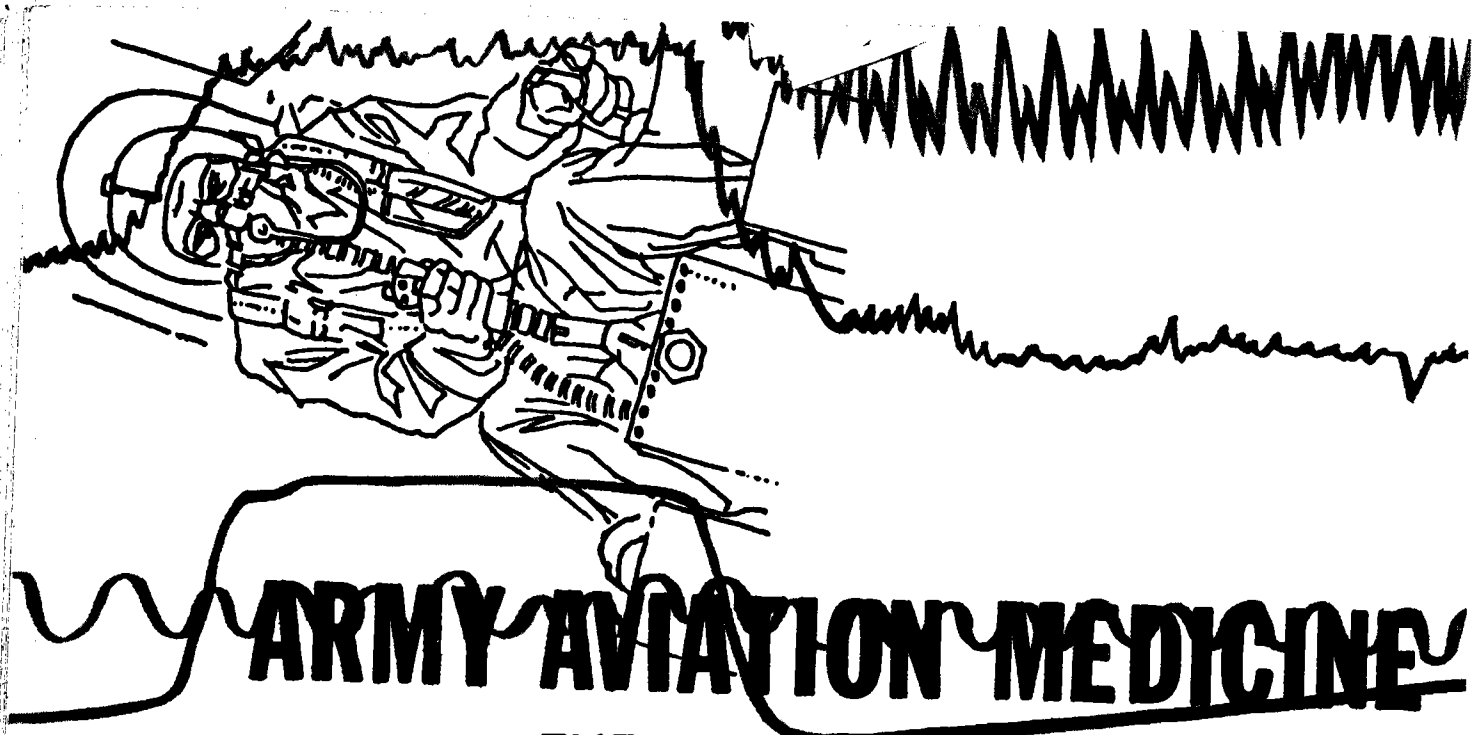

ARMY AVIATION MEDICINE

THE ARMY AVIATION STORY
PART VIII

Major Roland H. Shamburek and Colonel Spurgeon H. Neel

THE STORY OF Army Aviation Medicine might conceivably start during World War I when Maj Theodore C. Lyster, MC, USA, was appointed the first Chief Surgeon, Aviation Section, Signal Corps, United States Army. As such, his contributions in the fields of physical standards, pilot selection, physical examination, research, and specialized medical support for air units earned him the title of "Father of Aviation Medicine in America." Subsequent contributions of Army Aviation Medicine in the development of the U. S. Army Air Forces might also be reviewed. However, these do not offer a true chronological sequence to the establishment of the Army Aviation Medicine program.

Army Aviation Medicine cannot even claim the same birthday as Army Aviation, since the 6 June 1942 memorandum which made light aircraft organic to the Field Artillery did not incorporate special associated medical support. This support was provided by the Army Air Forces along with many other activities. Problems encountered by the Artillery's original flying groups at Fort Sill, Okla., were quite similar to those under investigation by flight surgeons in the Army Air Forces, and separate medical support and research would have invited duplication of effort.

In World War II Army liaison pilots in combat noted in many instances that true aviation medical support could not be maintained because of the lack of readily available Army Air Forces medical facilities. Nevertheless, the widely dispersed operations of Army liaison pilots made any consideration of specialized medical support unfeasible and premature.

Even the establishment of an autonomous United States Air Force in 1947 (and subsequently its own medical service) did not result in the birth of the Army Aviation Medicine program. Most qualified Army flight surgeons transferred to the Air Force, and under existing peacetime conditions Army Aviation depended almost completely upon experienced Air Force medical personnel for aviation medicine commitments. Actually, Army Aviation Medicine cannot point to a specific memorandum or date and claim a birthday. The program materialized as the need for it grew.

In 1950, Lt Col Rollie M. Harrison, a former Army Air Forces flight surgeon, was the only Army medical officer developing what could be considered an Army Aviation Medicine program. At Fort Sill, Okla., he was responsible for the medical care of aviation personnel and acted

Maj Shamburek is a Resident in Aviation Medicine, Fort Rucker, Ala.

Col Neel is Surgeon of the U.S. Army Aviation Center, Commander of the U.S. Army Hospital, and Senior Flight Surgeon of USAAVNS, Fort Rucker, Ala.

Lt Col Rollie M. Harrison

as advisor to the Director, Department of Air Training, in matters concerning aviation medicine.

The Korean War proved to be a major factor in initiating the current concept of close unit aviation medical support rather than in relying solely upon the Air Force's ancillary "area medical coverage" for Army Aviation. In Korea, Army Aviation units were located in forward areas with major tactical commands and were separated from Air Force facilities. Recognizing a need for its own direct medical support, the Army began sending selected medical officers through the Air Force basic aviation medicine course at the Air Force School of Aviation Medicine, Randolph AFB, Texas. Major Spurgeon H. Neel (now Colonel) was the first to complete this course, in March 1951. (Six others completed this 6-week course in 1952, but they left Army Aviation Medicine for other duties or left the service after their normal tour of duty.)

Colonel Neel used information gained during this course while serving as operations officer in the Eighth Army Surgeon's office in the Korean War, and later as commanding officer of the 30th Medical Group in Korea (June 1953 - November 1954). In these capacities he was instrumental in establishing Army aeromedical evacuation policies and organization, and, in March 1954, in developing the policies for using aviation medical officers within the Eighth Army.

Further recognition of the growing role of Army Aviation and its medical aspects was reflected on 17 October 1952 when the Army directed that the Surgeon General, along with the Army Assistant Chiefs of Staff for G-1, G-2, and G-3; the Chief of Army Field Forces; the Chief Signal Officer; the Chief of Transportation; and the Chief of Engineers establish within their offices an agency to supervise and coordinate all functions related to Army Aviation.

As such, Section II, the Surgeon General's office Order Number 62, dated 6 November 1952, established the Army Aviation Section as a component of the Hospitalization and Operations Branch of the Medical Plans and Operations Division within the Office of the Surgeon General. This section was given the responsibility for

- the overall supervision and coordination of functions of the Surgeon General relating to Army Aviation;
- furnishing technical advice to the Department of the Army on medical matters pertaining to Army Aviation;
- evaluating aircraft ambulance unit requirements for current and planned operations and making recommendations on total numbers of units to be used in mobilization planning.

Major Leonard A. Crosby (now Lieutenant Colonel) of the Medical Service Corps, was the first chief of the Army Aviation Section. (On 1 December 1954 Colonel Neel became the first Army Aviation Medical Corps officer to head the section.)

On 12 November 1952, AR 40-110 established standards to be used by medical officers performing aviation physical examinations. The regulation differed very little from the standard AF examination, but it did make this information available in a specific regulation on an Army-wide and officially recognized basis.

However, the majority of flying examinations, other than at Fort Sill, continued to be performed by Air Force flight surgeons. This was mainly due to the small number of Army Aviation medical examiners trained after the initial group. Only two Army medical officers were graduated from the formal Air Force course in aviation medicine between December 1952 and October 1954. Quotas for the 11-week course of training had been available throughout this period, but Army medical officers were reluctant to volunteer for the aviation medicine program. They knew little about it or its career potentials.

To partially offset this, the Army Medical Field Service School at Fort Sam Houston, Texas, added 46 hours of instruction in aviation medicine for career Army Medical Corps officers attending the primary course in military medicine. Also, 17 graduates of the advanced course in military medicine in 1953 were given a short course of instruction (46 hours) at the Air Force school at Randolph AFB, and then two weeks of practical orientation in Army Aviation Medicine at the Army Aviation School, Fort Sill, Okla. There were mixed sentiments on the adequacy of this training, including a letter from this class recommending a longer period of training. However, it was necessary to continue this pro-

gram as an interim measure until further volunteers could complete the formal 11-week Air Force course.

Early 1954 marked the first formal recognition within the Army of a distinct aviation medicine military occupation specialty. MOS 3160, Aviation Medical Officer (AMO), was established for officers who were to "provide aviation and general medical service for Army Aviators and associated ground personnel in hospitals, dispensaries, field units and other military installations." To qualify for this MOS, Army medical officers were required to be graduates of a recognized course in aviation medicine and capable of performing the required duties of an AMO. The title of Aviation Medical Examiner was eleminated. It had been misleading, and it was frequently misinterpreted to an extent that Army Aviation medical examiners often found themselves with a primary and sole duty of performing all physical examinations for a particular installation. The new title did not assure AMOs that they would not be responsible for all physical examinations, but it did offer some basis for involvement in other important phases of an active aviation medicine practice. The new MOS made no mention of flight requirements or incentive or hazardous duty pay.

A meeting in the Surgeon General's office on 2 April 1954 on the subject of the present and future position of Army Aviation Medicine resulted in the following recommendations:

- continued use of Air Force and Navy flight surgeons as consultants when appropriate;
- greater use of the formal USAF course in aviation medicine to train Army medical officers rather than the interim 46-hour short course in operation;
- consideration of flying pay as an incentive to interest additional medical officers in aviation medicine;
- aviation medicine should be considered as part of field medicine.

No definite decision was reached on these subjects. However, the Medical Plans and Operations Division was instructed to study these areas on a continuing basis and implement improvements when feasible.

The Army's projected requirements in late 1953 included 17 aviation medical officers as of 1 January 1954; 30-35 by the end of fiscal year 1954; and 60-70 by the end of fiscal year 1955. These requirements were based on projected Army Aviation growth and accepted aviation medical officer authorization policy. The latter stated that any installation or unit with over 30 pilots should be authorized at least one aviation medical officer. This meant that an AMO would be assigned to each Division, Corps, Field Army, Transportation Helicopter Battalion, and at major commands and schools—such as the Army Aviation School.

This recognition of Army Aviation Medicine undoubtedly contributed to an increase in medical officer applicants for the formal aviation medical course at Randolph AFB. From October 1954 to December 1955, 24 Army medical officers were graduated from this school and the orientation course at Fort Sill.

In late 1954, major medical commanders were requested by the Surgeon General's office to study the problem of assignment and use of aviation medical officers and to submit specific recommendations by July 1955. Based on these recommendations, basic TOEs and TDs were subsequently changed to incorporate aviation medical officers. The final recommended plan of utilization remained essentially unchanged from previously suggested authorizations. In many cases, the aviation medical officer was not an added authorization but only substituted for a "Medical Officer, General Duty" (MOS 3100), involving both general and aviation medicine duties.

Army Aviation Medicine at Fort Sill continued to be represented by Colonel Harrison. When the Army Aviation School was formally established at Fort Sill on 1 January 1953, a medical section was incorporated as a school staff position. As such, the senior medical officer acted as technical consultant to the director of the Department of Air Training on aviation medicine in addition to operating the flight dispensary, conducting medical training, and maintaining the necessary medical records. Colonel Harrison remained in this capacity until he was transferred to Germany in 1955.

The movement of the Aviation School from Fort Sill to Camp Rucker in 1954 was not without its share of medical problems. In 1955 Colonel William H. Byrne succeeded Colonel Harrison at the School as Staff Aviation Medical Officer. While Camp Rucker was being organized as the Aviation School, long hours and the lack of adequate facilities [which were under construction] rapidly created a problem of physical and mental fatigue among instructors. Recognizing this problem, Colonel Byrne became actively involved in attempting to regulate maximum individual flying hours and in making numerous other recommendations related to aviation safety.

Col William H. Byrne

Attrition due to previously undetected physical defects continued to be a major problem at the Aviation School in 1955. However, little could be accomplished until a sufficient number of trained AMOs were available throughout military installations to adequately perform initial examinations on applicants. The Surgeon General's office acted to meet the problem by reviewing all disqualified examinations to determine the major discrepancies and inadequacies causing this attrition and to initiate corrective action at the installation performing entrance examinations.

Following the move to Camp Rucker, certain areas of concern to the medical section took on an air of humor, as shown in Colonel Byrne's letter of 25 April 1955 to the Commanding General, Army Aviation Center. Colonel Byrne's only officer (an MSC pilot) was required by post regulations to serve from sunrise to sunset as standby pilot for an emergency-equipped H-13 rescue helicopter. This was in addition to his primary duties as Colonel Byrne's administrative assistant, the medical detachment commander, motor officer (11 ambulances), training officer, Class A finance officer, and assistant adjutant general. Obviously, Colonel Byrne felt one officer was unable to accomplish all of these duties and rather logically requested a revision to the regulation and additional medical personnel.

About the same time a letter of reply from Colonel Byrne's office relative to the acquisition of books by the school library reflected a rather humorous situation: "Concur but please do not stock any medical text other than medical history . . . certain people memorize symptoms of certain disorders and present them in a very convincing manner."

In 1955 several other significant happenings occurred in aviation medicine. On 2 March, TB MED 244, "Army Aviation Medicine," was published and was one of the first truly Army Aviation oriented medical publications. It described the duties and functions of an aviation medical officer and presented detailed procedures for accomplishing the flight physical examination. In addition, it gave a brief but concise resumé of the physiological, psychological and administrative information required to conduct an effective "care of the flier" program. This TB MED is still in effect with only minor change.

In August 1955, the Surgeon General recommended that

- participation in frequent and regular aerial flights be considered necessary to the effective practice of aviation medicine;
- Army Aviation medical officers, actively engaged in the practice of aviation medicine, hence required to participate in frequent and regular aerial flights, shall be considered eligible for non-crewmember flying status.

These recommendations were approved in September 1955 by the Army Assistant Chief of Staff, G-1. At that time there were 28 qualified AMOs who were authorized non-crewmember flying status with its accompanying hazardous duty pay.

Also in 1955, the Surgeon General initiated action to secure authorization for a distinctive insignia to be worn by qualified aviation medical officers. From custom and long experience, flying personnel had come to expect their physicians to wear wings. In addition to facilitating the practice of aviation medicine, it was felt this would serve as an additional incentive for career medical officers to enter the program. Such authorization was secured in the summer of 1956.

In spite of the apparently increased awareness of the medical problems accompanying the growing Army Aviation program, proper utilization of assigned AMOs frequently was overlooked. Upon reporting to their first assignment, many AMOs were greeted with statements such as, "I thought we let the Air Force handle those problems" or, "We've been looking for a fulltime specialist in physical examinations." Consequently, an informational brochure, "Medical Aspects of Army Aviation," dated 1 October 1955, was distributed to the field to assist in a better understanding of the Medical Service's role in Army Aviation. In addition, a Department of the Army letter, dated 7 June 1956, was published to assist in the assignment and utilization of AMOs by local commanders.

Further expansion of the Army's aviation medical training program occurred in July 1956 when the U. S. Naval School of Aviation Medicine, Pensacola,

Fla., began accepting Army medical officers for its 22-week course. This did not replace Army participation in the Air Force course at Randolph. Rather, it provided an expanded training program for Army medical officers. The last six weeks of the Navy course involved an extensive flying program, including soloing the T-34 aircraft by most students.

Lieutenant Colonel Richard B. Austin, III, and Capt Henry B. Tyminski were the first Army graduates (on 14 December 1956) from the Naval School of Aviation Medicine. Approximately 7-8 medical officers per year completed this course over the next 5 years. In addition, about 118 medical officers completed the Air Force Primary Course at Randolph AFB from 1956-1961. Army graduates of both schools continued to attend the Army Aviation Medical Officers Orientation Course at the Army Aviation School immediately after completion of their respective training with the Navy or Air Force.

The year 1956 was significant in other respects for Army Aviation Medicine. The 19 April 1956 order which directed the Army to assume responsibility for all Army Aviation training also increased the Army's responsibility for its own aviation medical support.

In August 1956 the Army Aviation medicine program received added stature when the Army Aviation Section in the Surgeon General's office was elevated to branch status. Lieutenant Colonel Spurgeon H. Neel had served in this position since 1 December 1954 and was responsible for monitoring and supervising overall aviation medicine and aeromedical evacuation activities within the Office of the Surgeon General. He remained chief of the Aviation Branch until September 1957 when he became the first Army medical officer to enter the formal United States Air Force advanced program in aviation medicine, leading to certification as a specialist in that field.

Army participation in the Aviation Safety Course at the University of Southern California began in October 1956 and proved mutually beneficial to Army Aviation and Army Aviation Medicine. Graduates of this course (non-Medical Corps personnel), having been extensively exposed to aviation physiology and psychology during their 10-week course of instruction, were better able to understand and work with unit flight surgeons concerning the medical aspects of accident investigations. Such team work emphasized the importance of considering physiological and psychological factors in aircraft accident investigations.

Twenty-five additional aviation medical officers were graduated from the Air Force Aviation Medicine School and seven from the Navy's school in 1957. This still fell short of the Army's requirement for approximately 67 AMOs; however, the addition of about 30-35 new AMOs yearly provided aviation medical support to various commands until a total of 117 AMOs was reached in February 1962.

In October 1958, the first Army Aviation medical officers completed the Crash Injury Investigation Course sponsored by Aviation Crash Injury Research of Cornell University (presently a division of the Flight Safety Foundation). This 2-week course, held in Phoenix, Ariz., was designed to train key military and civilian personnel (medical and nonmedical) in crash injury investigation, reporting, and analysis. Since the first class, about 80 AMOs have completed this training.

In June 1960 the first Army Aeromedical Symposium, sponsored by USABAAR, was hosted by the Naval School of Aviation Medicine in Pensacola, Fla. The symposium was attended by many senior Army medical officers, aviation medical officers, and related personnel in Army Aviation. Outstanding authorities, both military and civilian, presented a program oriented toward Army Aviation Medicine, particularly those aspects related to aviation safety. This was the first time a sizeable group of Army Aviation medical officers met and discussed common problems involved in the practice of aviation medicine. The meeting also provided the opportunity to present the role of aviation medicine to the senior medical officers in attendance and, thereby, increase their understanding of the role of Army Aviation Medicine.

Lieutenant Colonel Spurgeon H. Neel completed his formal residency training in aviation medicine at the Air Force School of Aerospace Medicine in 1960 and was certified by the American Board of Preventive Medi-

Col Spurgeon H. Neel

cine in the specialty of aviation medicine. As such, Colonel Neel became the first board certified flight surgeon in Army history. He was assigned to Fort Rucker after this training and subsequently became hospital commander and flight surgeon for the Aviation Center, the position he now occupies. Since 1960 two to three Army flight surgeons per year have entered the Air Force residency program.

One of the most notable developments in Army Aviation Medicine was the formal recognition on 1 July 1960 of Fort Rucker as a third year (Phase III) training site for the Air Force Aviation Medicine Residency Training Program. Use of Fort Rucker provided Phase III residents a training site in an Army Aviation environment and was also beneficial to the Aviation School and Center, which is well able to use these experienced flight surgeons. As of September 1962, eight individuals were in residency training:

Major Harold R. Chappell, Maj Roland H. Shamburek and Capt James E. Hertzog in the third year of training (Phase III), which is conducted at Fort Rucker.

Major Quitman W. Jones and Maj Kelly C. Gregory in the second year of training (Phase II), held at the USAF School of Aerospace Medicine, Brooks AFB, Texas.

Captain William H. Hark, Capt Delvin E. Littell and Capt Dominic J. Rosato in their first year (Phase I), at the Harvard School of Public Health, Boston, Mass.

Another notable medical contribution to Army Aviation was the establishment of the Army Aeromedical Research Unit at Fort Rucker on 6 July 1962 under the command of Lt Col John D. Lawson. This unit, conceived by Colonel Neel, has the mission to define, investigate, and recommend solutions to aeromedical problems encountered in Army Aviation. It also serves as a central source of reference material for the Army in aviation medicine. Maximum use will be made of available knowledge, coordinated efforts with other military and civilian research activities, and further related research to answer the needs of Army Aviation.

In other areas Army Aviation medical officers have been assisting in the National Aeronautics and Space Administration's Project Mercury. Notable among these are Capt (now Maj) William S. Augerson who recently completed a 3-year assignment with NASA personnel at Langley AFB, Va., working on capsule design and in the training of the astronauts. Other AMOs who played important roles in Project Mercury are Lt Col John A. Sheedy, Lt Col John D. Lawson, and Capt Richard A. Pollard.

Army Aviation Medicine also was represented with the Federal Aviation Agency for about 3 years by Maj Wayne R. Otto (now Lt Col) while he was a staff medical officer, Office of the Civil Air Surgeon, FAA. Colonel Otto is presently chief of the Aviation Branch in the Surgeon General's office.

Lt Col Wayne R. Otto

In addition, Aviation medical officers have represented the Army in offices or on committees of USABAAR, the NATO Advisory Group for Aeronautical Research and Development, the Joint Committee on Aviation Pathology, the Aviation Crash Injury Research activity, Aerospace Medical Association, and many others.

On 1 July 1962 Aviation medical officers with a military occupational specialty (MOS) of C3160 (flight surgeon) or B3160 (senior flight surgeon) were authorized crewmember flying status. This designation gave Army flight surgeons status comparable to that of Navy and Air Force flight surgeons. As of 1 September 1962 there were 37 medical officers with this MOS, plus 60 with MOS D3160 (aviation medical officer).

The future of the Army Aviation Medicine program will certainly parallel the overall Army Aviation program. Medical problems will be met by prior planning rather than corrective action, and such planning is now in being by a fast growing, dedicated group of aviation medical officers.

Army Aviation Medicine will continue as a special field—largely preventive medicine—concerned with integrating, applying and extending fundamentals of clinical, basic medical and allied sciences to biological problems associated with flight. The mission will remain to promote safe and efficient flight operations, maintain the health and longevity of the flying personnel, and contribute to and support the overall mission of Army Aviation.